The

# Commonwealth Forestry Review



Vol. 55, 1976

Published by
The Commonwealth Forestry Association
11 Keble Road, Oxford OX1 3QG

Price to Non-Members £10 net

LIBRARY LIBRARY

## THE COMMONWEALTH FORESTRY ASSOCIATION

Incorporated by Royal Charter November 1921, and by Supplemental Royal Charter, 1962

11 KEBLE ROAD, OXFORD OX1 3QG Telephone: 50156

#### Patron:

### HER MAJESTY THE QUEEN

#### President:

SIR S. S. MALLINSON, C.B.E., D.S.O., M.C., D.L.

#### Vice-Presidents:

SIR HARRY CHAMPION, C.I.E. E. BRYAN LATHAM, C.B.E., M.M. SIR ARTHUR GOSLING, K.B.E., C.B. J. A. DICKSON, C.B.

#### Past Chairmen:

1921-22 The Rt. Hon. VISCOUNT NOVAR, K.T., G.C.M.G., P.C.

1923-24	Colonel The Rt. Hon. LORD COURTHOPE, M.C., P.C.	
1924-27	Sir JOHN STIRLING MAXWELL, Bt., K.T.	
1927-32	Sir P. H. CLUTTERBUCK, C.I.E., C.B.E., V.D.	
1933-34	Sir JOHN STIRLING MAXWELL, Bt., K.T.	
1934-37	The Rt. Hon. VISCOUNT STONEHAVEN, G.C.M.G., D.S.O., P.C.	
1938-54	The Rt. Hon. The EARL OF CLARENDON, K.G., G.C.M.G., G.C.V.O., P.C.	
1954-59	The Rt. Hon. LORD MILVERTON, G.C.M.G.	
1959-61	Sir HARRY CHAMPION, C.I.E.	
1961-64	E. BRYAN LATHAM, C.B.E., M.M.	
1964-72	Sir ARTHUR GOSLING, K.B.E., C.B.	
1972-74	J. A. DICKSON, C.B.	

Chairman: C. G. A. LATHAM, M.A., A.C.A. Vice-Chairman: J. WYATT-SMITH Hon. Treasurer: P. J. WOOD

Governin	ng Council:
Governing P. G. ADLARD (Britain) A. E. AITKINS, O.B.E. (Britain) J. D. BRAZIER (Britain) Sir HARRY CHAMPION, C.I.E. (Britain) M. J. CONWAY (New Zealand) Dr. D. A. N. CROMER (Australia) S. DARDAINE (Trinidad) Dr. H. C. DAWKINS, M.B.E. (Britain) J. A. DICKSON, C.B. (Britain) J. H. FRANÇOIS (Ghana) O. FUGALLI (FAO) Dr. M. GANE (Britain)	C. G. A. LATHAM (Britain) Sir S. S. MALLINSON, C.B.E., D.S.O., M.C., D.L. (Britain) T. S. MALLINSON (Britain) K. MARTEN (Solomon Is.) O. M. MBURU (Kenya) J. SCOTT McBRIDE (Britain) D. L. McNEIL (Britain) C. S. MMBANDO (Tanzania) Dr. F. R. MOULDS (Australia) A. M. OSENI (Nigeria)
Sir A. H. GOSLING, K.B.E., C.B. (Britain) R. E. GROVES, C.B.E. (Britain) A. HAMID (Bangladesh) V. M. HEALY (Australia) G. D. HOLMES (Britain) D. R. JOHNSTON (Britain) P. R. O. KIO (Nigeria) K. L. LAHIRI (India) A. F. A. LAMIR O. R. F. (Pritain)	Dr. D. R. REDMOND, D.F.C. (Canada) S. D. RICHARDSON (New Zealand) M. L. S. B. RUKUBA (Uganda) R. G. SANGSTER, C.B.E. (Britain) C. D. SCHULTZ (Canada) DUNCAN STEVENSON, O.B.E. (Britain) E. J. WARD (Canada) G. WEBSTER, O.B.E. (Britain) P. J. WOOD (Britain)

J. WYATT-SMITH (Britain)

E, BRYAN LATHAM, C.B.E., M.M. (Britain)

#### EDITORIAL COMMITTEE

Dr. H. C. Dawkins, M.B.E., M.A., (Commonwealth Forestry Institute)
P.J. Wood, M.A. (Commonwealth Forestry Institute)
J. D. Brazier, B.Sc. (Princes Risborough Laboratory)
C. J. W. Pitt, B.Sc., M.A., M.I. For (Editor and Secretary)

# **COMMONWEALTH FORESTRY REVIEW**

# INDEX TO VOLUME 55, 1976

AROUND THE WORLD	Page
Canada Animal fodder from undesirable species	100
Forest fires in British Columbia	277
Reclamation Review	100
Trapping timber pests – Ambrosia beetles	178
Use of radio-controlled model aircraft for ULV insecticide application	178
Cyprus Help from the United Kingdom	101
East Africa Afforestation of lowland areas	181
Egypt	
Shelterbelts in Nigeria and Egypt	100
General	
FAO – Fuller harvesting of forest resources	277
World timber scarcity growing	182
Poland – modifying wood strengthens timber	182
The Telerelaskop	278
USSR - plants first "computer grown" forest	182
India	1-30
Field grafting trials with Caribbean pine	280
Research at Coimbatore	101
New Zealand	200
Beech schemes	280 281
Schlich Memorial Award	201
Nigeria	102
Flowering and fruiting of Triplochiton scleroxylon	183
Shelterbelts in Nigeria and Egypt	100
Norway	282
Education and training of research workers	282
IUFRO XVI World Congress, Oslo	20.2
Peru	101
Newsprint from bagasse	101
Republic of South Africa	
National Timber Research Institute	102
Swaziland	
Commonwealth Development Corporation	19

Sweden 1	84, 283
Expansion of pulp and paper capacity Timber	284
Whole tree utilization	102
Tanzania	4.0
Commonwealth Development Corporation	19
United Kingdom	22 206
Alboniculture	22, 286
Award Schlich Memorial Prize, Oxford Conference on forest management, R.S.A.	04, 287
Disposal of elm timber	105
Drop in tree planting	19
Film "Tree Country"	106
1 Grest pone,	85, 287
Forestry at the Royal Show, 1975	103
Forestry Commission objectives Future of wood preservation	295
Institute of Foresters of GB and NI	21
International Woodworking Industries Exhibition	- 23
Journal of the Institute of Wood Science	185
National Forest Machinery Demonstration	292
New Chairman, Forestry Commission	284
Properties and uses of elm wood	106 294
Stress grading of timber TRADA courses, 1976/77	294
University College of North Wales	107
United States of America	
Biodegradation - Third International Conference	298
Centenary, The American Forestry Association – 1875-1975	186
Parks – a new international journal	187
Zambia	
World Forestry Day	303
ARTICLES—Titles	
Application of research results in forestry, by Johnston, D.R.	335
Broadleaved species interference with <i>Pinus caribaea</i> in a managed pine savanna, by Kellman, M.C.	
Commentary from a land user on forestry and terrestrial ecology, by Philip, M.S.	229
Density of tropical timbers as influenced by climatic life zones, by Chudnoff,	129
Martin	203
Die-back of Eucalyptus in the Solomon Islands, by Macfarlane, R., Jackson,	203
G.V.H. and Marten, K.D.	133
Erosion in the weather machine, by Stewart, Philip	155
Forest products: an assured future, by Raynham, E.A.	341
Forestry practice in Pritain is annihilated by J.N.R.	109
Forestry practice in Britain is applied terrestrial ecology, by Holtam, Brian Habitat utilisation by elephant in the Guinea Zone, by Afolayan, T.A.	123
Innovation and prosperity in forestry? by Richardson, Dennis	65
Interaction between phenology and rainfall in growth of Cordia alliodora in a	141
Plantation at Luffialba, Costa Rica by Blake John Rosero P and Loian I	27
internil results of thinning research on Cupressus lusitanica in Uganda by	10 20
Karam, F.K.	41
Notes on natural regeneration in Dominica, Windward Islands, by Bell, G.S.	27
Pocket electronic calculator for Barr and Stroud dendrometer, by Jager, Douglas J.	
Role of forest inventories in the development of tropical moist forest by Philip,	347
Michael S.	
Sampling in forest experiments, by Savill, P.S. and Stevenson, W.G.	57

Page

	Page
Sudden death, a disease of Cadam (Anthocephalus chinensis), by Gibson	n I A S
and Nylund, J.	219
Teak thinning experiment in Nigeria, by Lowe, R.G.	189
Volume sampling using indirectly estimated critical heights, by Bitterlich, What future for natural regeneration of tropical high forest? An apprais	Walter 319 sal with
examples from Nigeria and Uganda, by Kio, P.R.O.	309
Authors	
AFOLAYAN, T.A., Habitat utilisation by elephant in the Guinea Zone	65
BELL, G.S., Notes on natural regeneration in Dominica, Windward Island BITTERLICH, Walter, Volume sampling using indirectly estimated	ls 27
heights	319
BLAKE, John, ROSERO, P. and LOJAN, L., The interaction between ph and rainfall in growth of <i>Cordia alliodora</i> in a plantation at Turrialba	enology a, Costa
Rica CHUDNOFF, Martin, Density of tropical timbers as influenced by clima	37 atic life
zones	203
GIBSON, I.A.S. and NYLUND, J., Sudden death, a disease of Cadam ( cephalus chinensis)	_219
HOLTAM, Brian, Forestry practice in Britain is applied ecology	123
JACKSON, G.V.H., MACFARLANE, R. and MARTEN, K.D., Die-b	
Eucalyptus in the Solomon Islands  JAGER, Douglas J., Pocket electronic calculator for Barr and Stroud of	
meter JEFFERS, J.N.R., Forestry and terrestrial ecology	347 109
JOHNSTON, D.R., The application of research results in forestry	335
KARANI, P.K., Interim results of thinning research on Cupressus lusita	
Uganda	41
KELLMAN, M.C., Broadleaved species interference with Pinus caribae	a in a
managed pine savanna	229
KIO, P.R.O., What future for natural regeneration of tropical high fore	
appraisal with examples from Nigeria and Uganda	309
LOJAN, L., BLAKE, John and ROSERO, P., The interaction between phe and rainfall in growth of <i>Cordia alliodora</i> in a plantation at Turrialba	
Rica	37
LOWE, R.G., Teak thinning experiment in Nigeria	189
MACFARLANE, R., JACKSON, G.V.H. and MARTEN, K.D., Die-b	
Eucalyptus in the Solomon Islands	133
MARTEN, K.D., MACFARLANE, R. and JACKSON, G.V.H., Die-b Eucalyptus in the Solomon Islands	eack of 133
NYLUND, J. and GIBSON, I.A.S., Sudden death, a disease of Cadam (	Antho-
cephalus chinensis)	219
PHILIP, Michael S., The role of forest inventories in the development of the	
moist forest	57
PHILIP, M.S., A commentary from a land user on forestry and terrestrial	
RAYNHAM, E.A., Forest products: an assured future	341 141
RICHARDSON, Dennis, Innovation and prosperity in forestry?  ROSERO, P., BLAKE, John and LOJAN, L., The interaction between phe	nology
and rainfall in growth of Cordia alliodora in a plantation at Turrialba Rica	37
SAVILL, P.S. and STEVENSON, W.G., Sampling in forest experiments	331
STEVENSON, W.G. and SAVILL, P.S., Sampling in forest experiments	331
STEWART, Philip, Erosion in the weather machine	155
Countries	
Belize	229
Brazil	203
Britain	109, 123, 129
Columbia	203

Dominica French Guiana Nigeria Northern Ireland Solomon Islands Uganda	27 203 65, 189, 309 331 133 41, 309
Species	
Anthocephalus chinensis Cadam Cordia alliodora Cupressus lusitanica Pinus caribaea Teak	219 219 37 41 229 189
CORRESPONDENCE	24, 96, 173
EDITORIALS	1, 91, 169, 271
NEW MEMBERS	25, 95, 173, 275
NOTES AND COMMENTS	
B.R. Sen Award FAO Biennial Conference Forestry Commission News	6 8
Dutch elm disease New Secretary Alice Holt Library	4 4 4 9
Market for forest products Multi-process machines in forestry New Director of TRADA New Professor at Bangor	14 7 5
New Year's Honours News of Members Notable conifers	4 7 14
Roster of Specialists	8
Sehlich Memorial Prize, 1975 Theses on 35 mm microfilm	7
Tom Gill Memorial Prize Competition  Visit by the President of Tanzania to the CFI, Oxford	7
World catalogues of forestry literature	5 14
OBITUARIES	
Acheson, J.E., M.B.E.	16
Beeson, C.F.C., C.I.E. Clarke, C.	16 97
Cosgrove, J.R.	97
MacMillan, H.R., C.C., C.B.E. Marshall, W.G.	175
Thomas, A.V., M.B.E.	17 98
REVIEWS AND NOTES-Books and Publications	
Annotated Bibliographies of Cup. lusitanica, P. elliottii and P. patula Aspects of thinning Biology of Eucalypts	258 356
British-grown timber and building and construction industry	252 262
Change with time and the role of cyclones in tropical rain forest o bangara, Solomon Islands	n Kolom-

	1 48
Chemical tests for the presence of wood preservatives	164
Climate-diagram maps	81
Control of herbaceous weeds in Blackwood valley pine plantations	83
Dictionary of the flowering plants and ferns	254
Diseases of forest trees widely planted as exotics in the tropics and southern hemisphere. Part 1. Important members of the Myrtaceae, Leguminoseae,	
Verbenaceae and Meliaceae	84
Ecological survey of New Zealand's indigenous forests  Effect of instrument errors and stability of materials in area determination	80
Establishing vegetation in saline soil to stabilise sand, Walvis Bay, S.W. Africa	257 259
Euphorbiaceae of Borneo	160
Experiments with insecticides for the control of Dutch Elm Disease	163
Explore the New Forest	162
Fertilisers in the establishment of conifers in Wales and Southern England	83
Fertilisers in the forest: a guide to materials	164
Fiat book of New Zealand Trees	250
Field engineering for agricultural development	77
Fifty years of forestry research, UK	358
Flora of Tropical East Africa – Cannabaceae, Cochlospermaceae, Velloziaceae, Oliniaceae, Vahliaceae, Flacourtiaceae, Passifloraceae	82
Flora of tropical East Africa – Rubiaceae (Part 1) Flowering phenology and productivity in clonal seed orchards of <i>Pinus patula</i> ,	253
P. elliottii, P. taeda and P. kesiya in Rhodesia	80
Forest assessment	73
Forest energy and economic development	350
Forest Genetic Resources Information Nos. 1-4	164
Forest mensuration handbook, FC booklet 39	257
Forest products in the UK economy, FC Bulletin 51	261
Forest research areas and research plots in Peninsular Malaysia	358
Forest resources in the Asia and Far East Region	352
Forest tree seed directory, 1975	259
Forestry and game. Symposium, 1974	253 75
Forestry and the Nigerian economy Forestry on St. Helena	82
Forests for whom and for what?	74
Genetics of forest ecosystems	72
Group dying of conifers	357
Influence of spacing on crop characteristics and yield	79
Insects that feed on trees and shrubs	351
Introduction to insect pest management	247
Introduction to planning forestry development	255
Introduction to trees for S.E. Australia	250
Land Resource Report No. 8 - Forestry in the Seychelles	354
Land Resources of the Northern and Ruapula Provinces, Zambia – a recon-	355
naissance assessment Land Resource Studies – Belize (13, 14, 15)	254
Leben und werk von Dietrich Brandis	159
Life in forest and jungle	251
Macronutrient deficiency symptoms in teak, Nigeria	260
Manual of Forest Inventory with special reference to mixed tropical forests	249
Manual on establishment techniques in man-made forests	258
Manual on planning man-made forests	256
Marcotting (No. 25) and Rooting stem cuttings (No. 28) of Triplochiton	13.5
scleroxylon, Nigeria Research papers	259
Methodology of conservation of forest genetic resources	165
Natural finishes for exterior timber	361
Observations on timber properties of tropical pines in S. Africa and improvement	262
by tree breeding	253
Panorama of Canadian forests  Particle heard	73

	79
Philosophical approach to landscape planning	
Potential of western hemlock, western red cedar, grand fir and noble fir in	162
Britain Private forest farming in Nigeria	260
Production and use of tubed seedlings	84
Pulsing characteristics of P caribaga var. caribaga from Cuba	263
Demont of the third session of the FAO panel of experts on lorest gene resources	164 258
Report on FAO/DANIDA training course on forest seed collection and handling	256
Report on FAO/SIDA training course on forest inventory	256
Report on the survival and development survey of areas reforested by line-	
planting in Selangor, Peninsular Malaysia	357
Princes Rishorough Laboratory 1973 and	
1974	359
Passits of field tests on the natural durability of timber (1932-75)	361
Rush to destruction — an appraisal of the New Zealand Beech forest controversy	351
Stabilization of sand dunes in the west Sahara	362 257
Staff organisation. Technical note 41, Nigeria	359
Summary of research findings, Victoria, Australia	361
Tests on round timber fence posts	85
Timber preservation  Towards integrated control of tree aphids	163
Tree planting practices in African savannas	72
Tropical Forestry papers, No. 7 Pinus patula	251
Tropical moist forest	248
Tropical rain forests of the Far East	158
Tropical trees - variation, breeding and conservation	353
Troup's The silviculture of Indian trees	349
Uses of side looking airborne radar imagery for tropical forest studies	158
US investment in the forest-based sector in Latin America Weeding in the forest: a work study approach	83
Weed science – principles and practices	352
White spruce: artificial regeneration in Canada	356
Wood resources and demands, FC Record 95	261
Wood treatments	85
nnual Reports	
EAAEDO 1072	268
EAAFRO, 1973 Economic survey of private forestry costs in Scotland, forest year 1973	168
Economic survey of private forestry – Income and Expenditure – England and	100
Wales, forest year 1974	167
Fiji Pine Scheme, 1974	269
Ghana, Forestry Department, 1971 and 1972	86
Newfoundland forest insect and disease survey, 1975	363
New Zealand, Forest Research Institute, 1974	268
Nigeria, Federal Department of Forest Research, years 1966 to 1971	88
Queensland, Department of Forestry, 1974-5	165
Republic of Cyprus, Department of Forests, 1973	86
Republic of Kenya, Forest Department, 1969	87
Republic of South Africa, Department of Forestry, 1973-4	264
Rhodesia Forestry Commission, 1973-4 Rhodesia Forestry Commission, 1974-5	264
Tropical Products Institute, 1972-4	363 269
UK Forest Research report, 1974-5	363
UK, Forestry Commission 1973-4 and 1974-5	166
UK ODM Land Resources Division, 1971-4	270
UK Timber Trades Journal, 1976 special annual issue	270
Victoria Forests Commission, 1973-4 and 1974-5	266

Page